

WHAT IS CLAIMED IS:

1. A polynucleotide comprising the sequences of any one of SEQ ID NOS:1, 3, 5, 7, 9, 10, 12, 14, 16, 18, and 19.

2. An isolated polynucleotide having the sequence of

(a) any one of SEQ ID NOS: 1, 3, 5, 7, 9, 10, 12, 14, 16, 18, and 19;

(b) a naturally-occurring polynucleotide comprising a sequence of (a); or

(c) a naturally-occurring polynucleotide having at least 70% identity with a naturally-occurring polynucleotide of (b) and, in naturally-occurring neural cells, has its expression modulated when the cells are subjected to neurotoxic stress;

(d) a naturally-occurring polynucleotide capable of hybridizing under moderately stringent conditions to a naturally-occurring polynucleotide of (b) and, in naturally-occurring neural cells, has its expression modulated when the cells are subjected to neurotoxic stress;

(e) a fragment of a polynucleotide of (a), (b), (c) or (d) having at least 20 nucleotides; or

(f) a polynucleotide sequence complementary to a polynucleotide of (a), (b), (c), (d) or (e).

3. An isolated polynucleotide in accordance with claim 2, wherein said sequence of (a) is SEQ ID NO:3.

4. An isolated polynucleotide in accordance with claim 2 comprising a strand of a full-length cDNA.

5. An isolated polynucleotide in accordance with claim 3 comprising a strand of a full-length cDNA.

6. An isolated polypeptide comprising a protein encoded by a cDNA in accordance with claim 4, a variant which has an amino acid sequence having at least 70% identity to said protein and retains the biological activity thereof, or a fragment of said protein or variant which retains the biological activity thereof, or a functional derivative or salt of said protein, variant or fragment.

7. An isolated polypeptide comprising a protein encoded by a cDNA in accordance with claim 5, a variant which has an amino acid sequence having at least 70% identity to said protein and retains the biological activity thereof, or a fragment of said protein or variant which retains the biological activity thereof, or a functional derivative or salt of said protein, variant or fragment.

8. An isolated polypeptide comprising the amino acid sequence of any one of SEQ ID NOs:2, 4, 6, 8, 11, 13, 15, and 17, a variant which has an amino acid sequence having at least 70% identity to said polypeptide and retains the biological activity thereof, or a fragment of said polypeptide or variant which retains the biological activity thereof, or a functional derivative or salt of said polypeptide, variant or fragment.

9. A molecule which comprises the antigen-binding portion of an antibody specific for a protein, variant or fragment in accordance with claim 6.

10. A method of treating the effects of stroke, hypoxia, and/or ischemia, comprising bringing into the vicinity of the cells to be treated a polypeptide of SEQ ID NO:4.

11. A method for diagnosing cells which have been subjected to hypoxia and/or ischemia, comprising assaying for RNA comprising a sequence of any one of SEQ ID NOs: 1, 3, 5, 7, 9, 10, 12, 14, 16, 18, and 19 or for the expression product of a gene in which one of said sequences is a part, the positive finding of said RNA or expression product indicating the likelihood that such cells have been subjected to hypoxia or ischemia.

12. In a method for screening drugs which up-regulate or down-regulate a gene, the improvement wherein said gene is a gene which is transcribed to an RNA containing a sequence in accordance with claim 1.